

The background image shows a detailed aerial photograph of a rural landscape. It features a network of irrigation canals and drainage ditches cutting through large, rectangular agricultural fields. A major river or stream flows through the center of the image, with its banks and surrounding wetlands appearing in shades of green and brown. The terrain is relatively flat, with some minor elevation changes and small hills visible in the distance.

Red River Basin Mapping Initiative

“Redefining the landscape”

Budget Overview by Category

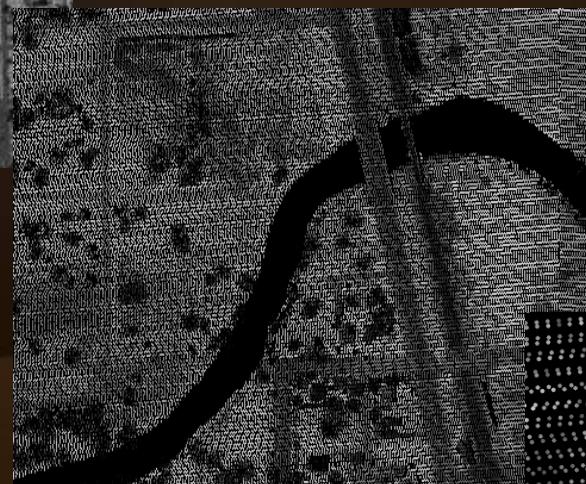
1. Data Collection (LiDAR and Imagery) ~ \$4,000,000
2. Quality Assurance ~\$275,000
3. (Dissemination/Archival/Application Development) ~ \$185,000
4. Project Management (Administration/Public Outreach/Coordination) ~ \$540,000



RRBMI Factoids

- 40,860 Miles²
- 45,918 Flight Miles
 - Each flight line swath = 1 mile
- 56,252,248,000 (56.2 billion) total “points” generated upon completion
 - 8 Terabytes of data
- <7-15 centimeter vertical accuracy

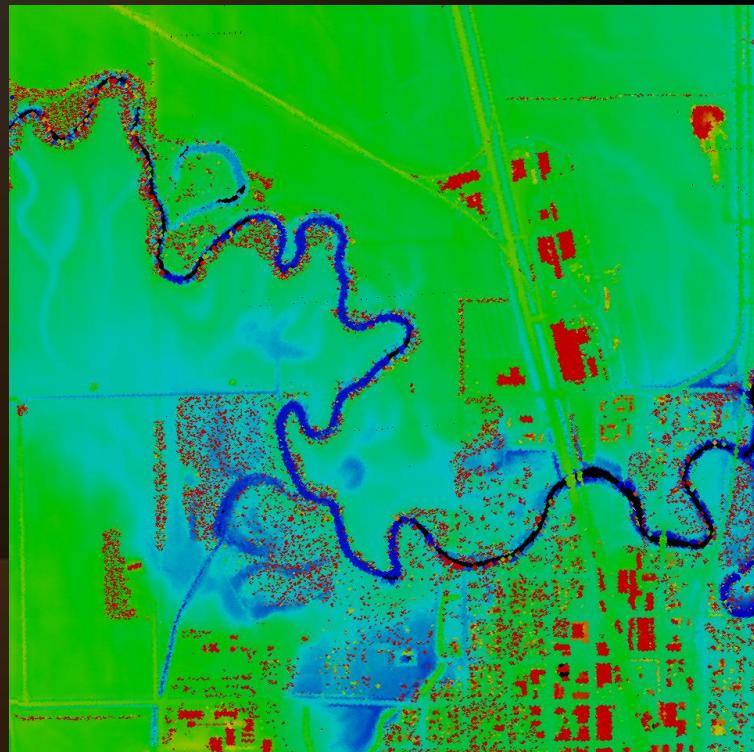
Light detecting and Ranging (LiDAR) Point Data (Intensity) Image

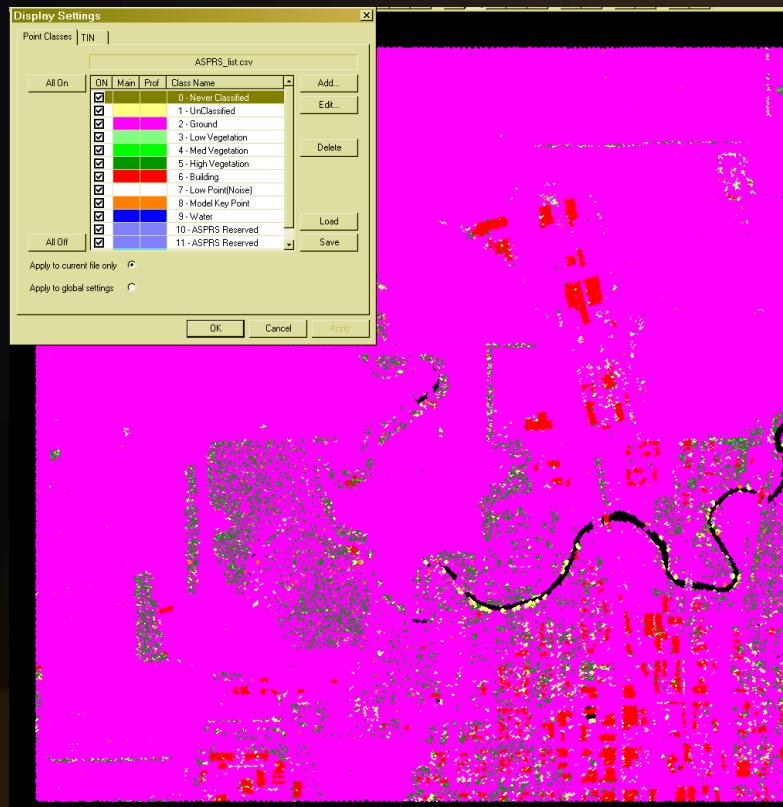


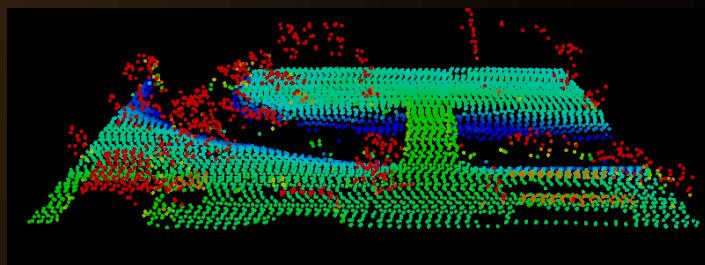
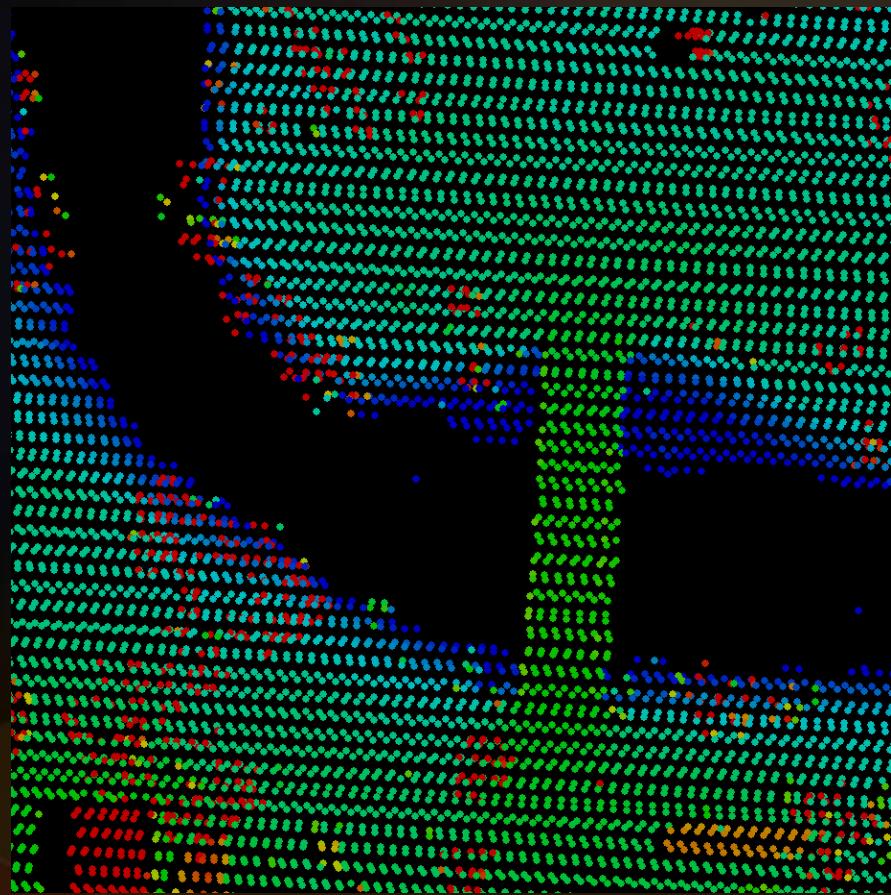
- Each Data Point - 4 Attributes:

1. Latitude (X)
2. Longitude (Y)
3. Elevation (Z)
4. Classification (Bare earth, high grass, brushlands, forest, and urban),





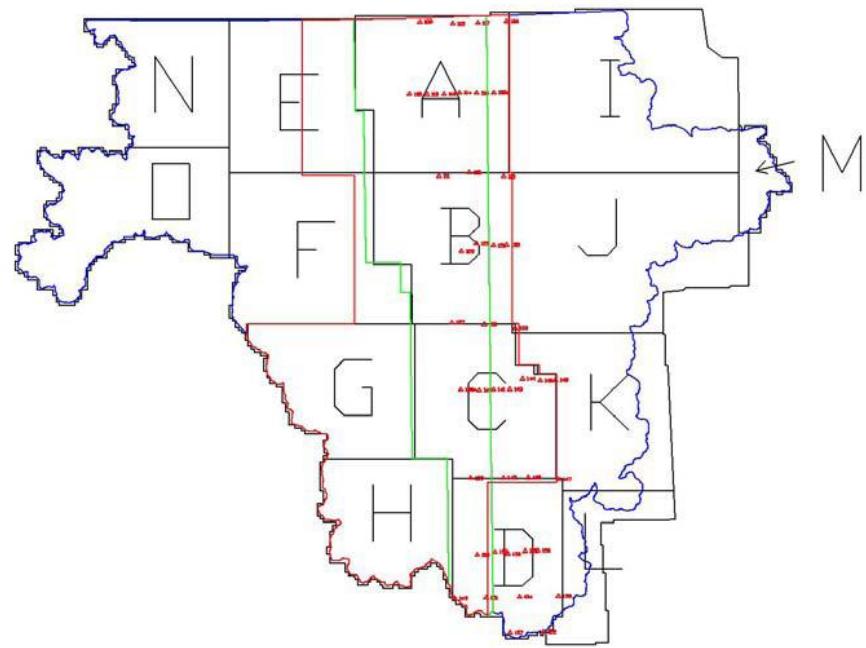




Collection Area Blocks

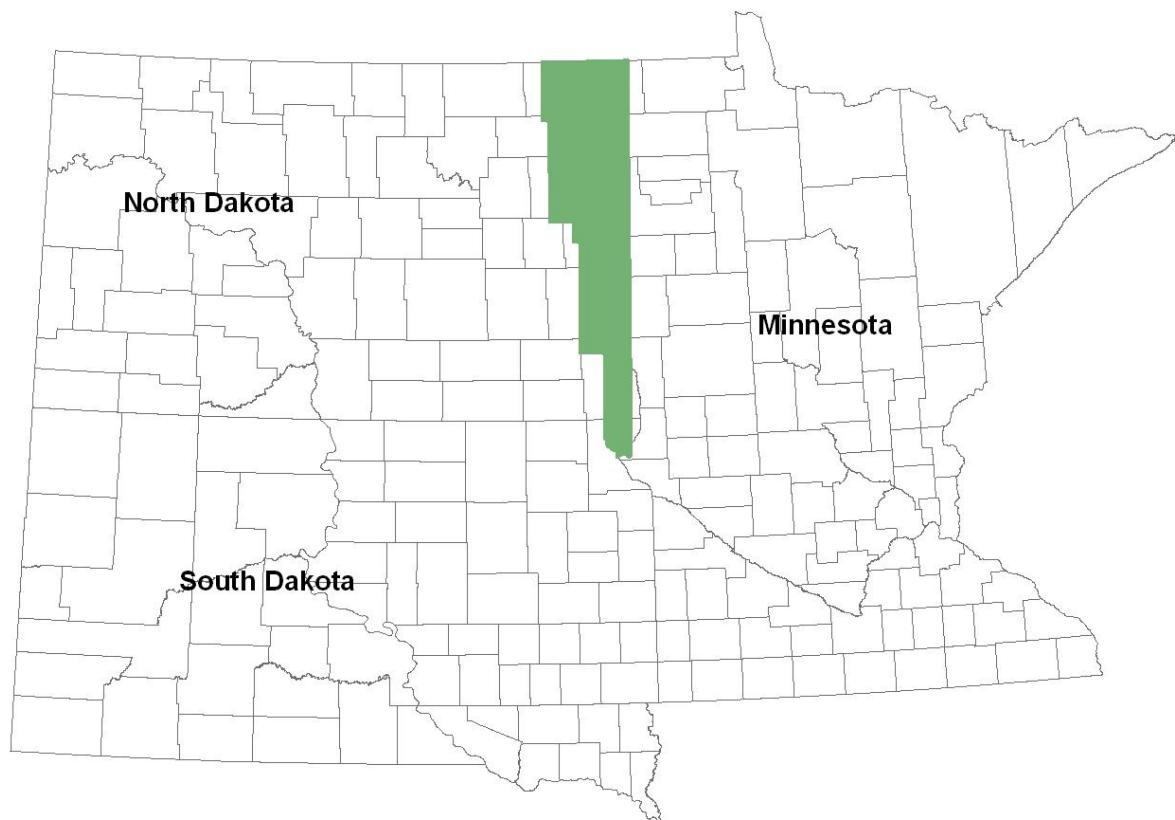
STATUS (Spring 2008)

- Block A 100%
- Block B 100%
- Block C 100%
- Block D 30%
- Block E 47%
- Block F 24%
- Block G 100%
- Block H 100%

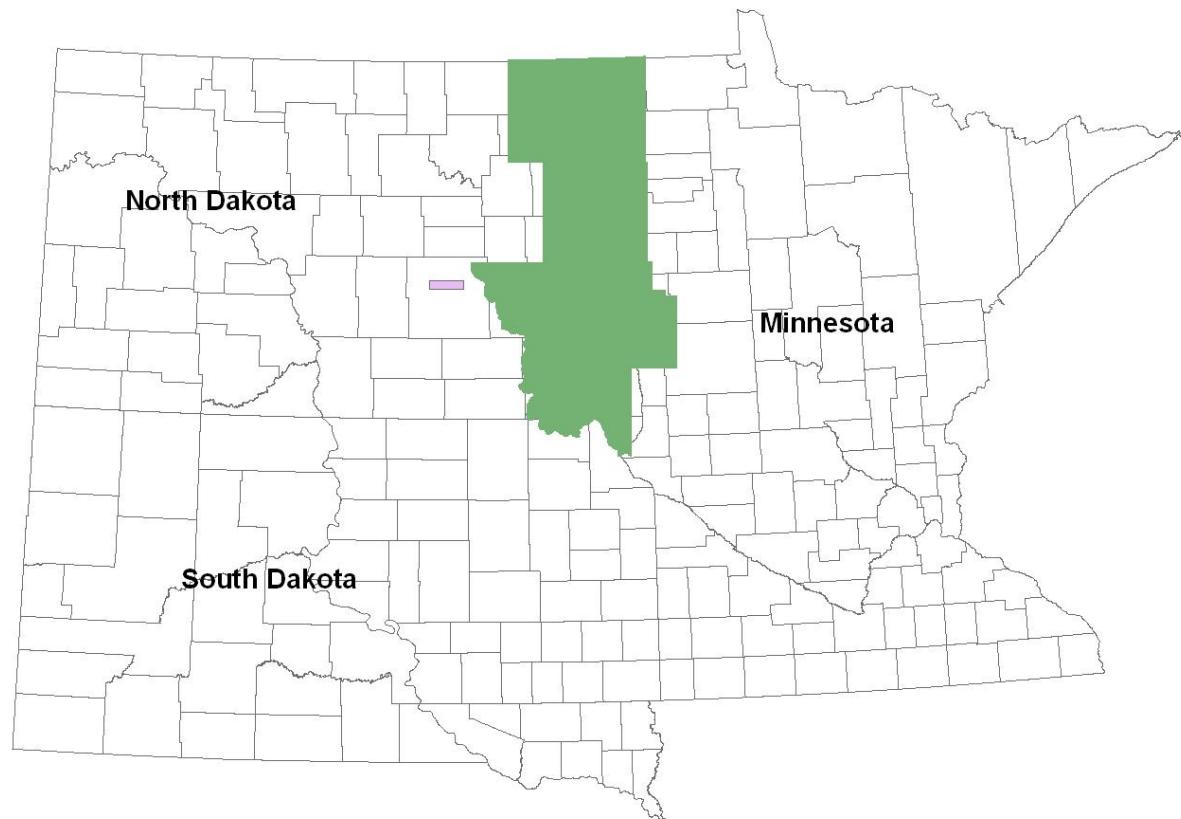


17584 sq miles LiDAR
8,350 sq miles Film

Spring 2008 Film Acquisition



Spring 2008 LiDAR Acquisition

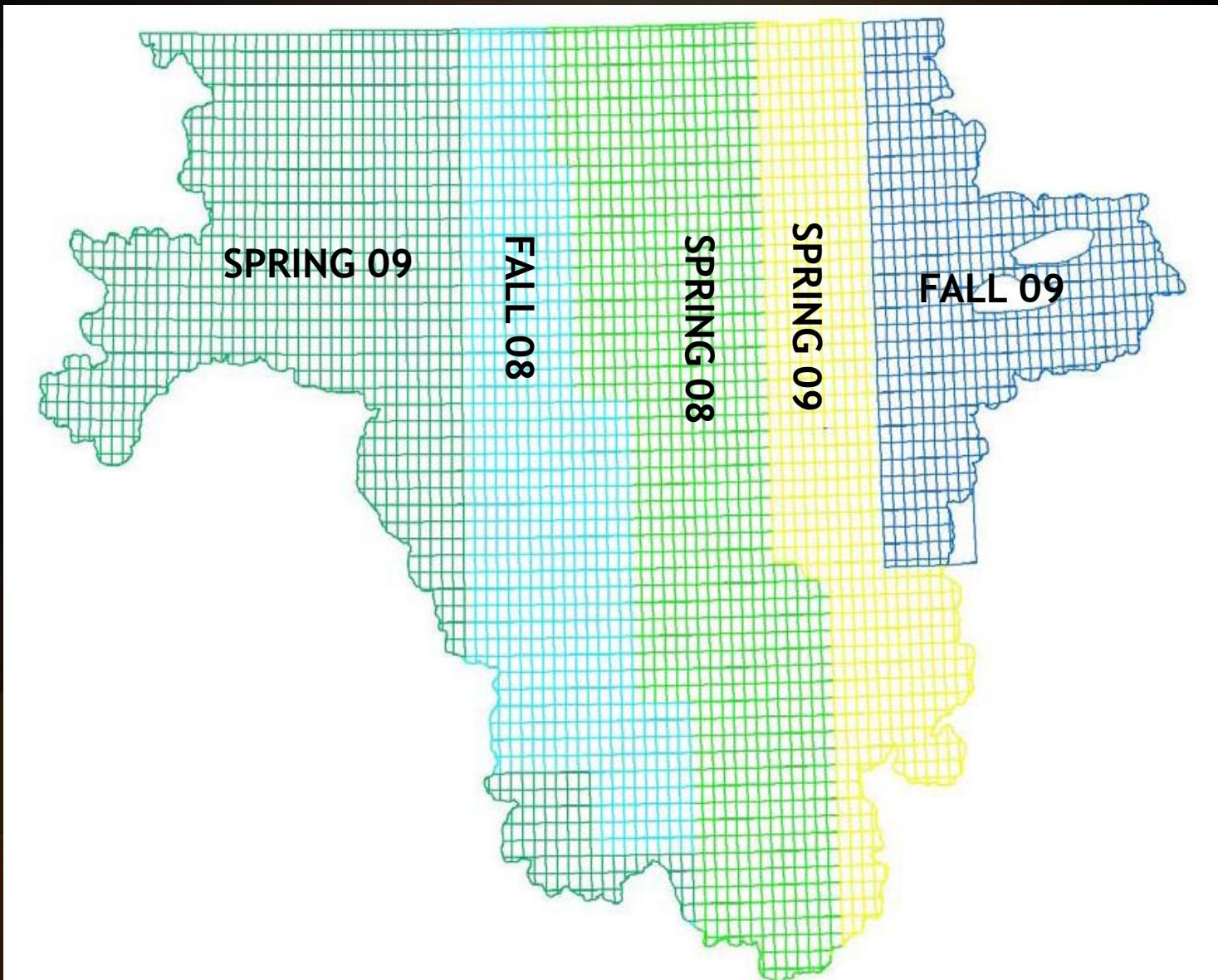




Block A

- **Shipped 9/1/08**
- **485.6 Gigabytes**
- **96,349 files in 431 Folders**
 - LiDAR Filtered Bare earth LAS Files
 - LiDAR First Return LAS Files
 - Flight Logs and jpgs (P-Cam imagery)
 - 1m Arc Grid created from Key points bare earth LiDAR
 - Hybrid 1m pixel B/W tiffs (georeferenced from raw LiDAR/hillshade)
 - Raw LiDAR (unclassified) corrected to ground LAS files
- **3rd Party review completed 10-08-08**

Collection Schedule



Data Availability

- <http://lidar.cr.usgs.gov/>

CLICK - Windows Internet Explorer
File Edit View Favorites Tools Help
CLICK Home Feeds (1) Print Page Tools

Welcome to the USGS Center for LIDAR Information Coordination and Knowledge

Home Bulletin Board Data Viewer Websites/References Media & Docs Contact Us

Discrete-return point clouds

Find out more about discrete-return lidar; See if publicly-available lidar is in your area of interest. Ask questions about the data, processing, derivatives and more on our bulletin board; browse and link to other websites about lidar.

Bare Earth

Find out more about the USGS bare earth elevation from lidar; go to our National Elevation Dataset (NED) page. NED contains bare earth elevation data created by lidar and other sources.

USGS-NASA-NPS EAARL Data

Find out more about USGS participation in the Geodyssey Project's collaboration with NASA and NPS to publish data acquired by the Experimental Advanced Airborne Research Lidar (EAARL) system. Optionally, visualize and download lidar data and CIR imagery in Google Earth.

Upcoming Events / Recent Links

View a dynamic calendar of upcoming events on the CLICK Bulletin Board.

Register for the Second National Lidar Meeting, May 21-22, Reston VA

Report from the First NLI Workshop [screen quality]

Report from the First NLI Workshop [print quality]

Presentations from the Workshops

Mission

There has been increasing demand for research utilizing all information generated from lidar remote sensing data and not just bare earth digital elevation models (DEMs). While this technology has been a proven mapping tool, effective for generating bare earth DEMs, research on using the entire point cloud of this remote sensing data for scientific applications have been slowed by:

- The high cost of collecting lidar
- A steep learning curve on research and understanding involving utilizing the entire point cloud.

The goal of CLICK is to facilitate data access, user coordination and education of lidar remote sensing for scientific needs.

Accessibility FOIA Privacy Policies and Notices

U.S. Department of the Interior | U.S. Geological Survey
URL: <http://lidar.usgs.gov/index.php>
Page Contact Information: lidar@usgs.gov
Page Last Modified: August 15, 2008

USA.gov TAKE PRIDE IN AMERICA

Start Calendar - Microsoft... Google Chrome WFS options samp... RedRiverBasinMep... CLICK - Windows ... Internet

International Water Institute Flood research and watershed education for the Red River Basin



*“Availability of good
information lies at the
heart of effective and
equitable decision making”*

(Allen and Kilvington 1999)

www.internationalwaterinstitute.org

FOR MORE INFORMATION CONTACT:

Charles Fritz

NDSU Fargo, ND

Email: charles.fritz@ndsu.edu

Phone: 701.231.9747

Mobile: 701.388.0861